

UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in 2014 (*Academic year*)

UNDERGRADUATE PROGRAMS

DEPARTMENT: Civil Engineering

DATE: April 21, 2015

PROGRAM(S) COVERED IN REVIEW: BS in Civil Engineering

COMMITTEE MEMBER(S) CONDUCTING REVIEW: Bradley Myers & Devon Hansen

1. STUDENT LEARNING GOALS

- | | | | |
|---------------------------------------|--------------|----------------|---------------------------|
| • Were any goals referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were goals well articulated? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Do goals address student learning? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The Department has an Assessment Plan that was adopted in Fall, 2004. The plan lists twelve program outcomes. Eleven of the twelve come, with slight modification from the Accreditation Board for Engineering and Technology (ABET), the accrediting agency for the Department. The Plan does not further break down the general program outcomes into specific learning objectives, which could make assessment of meeting those outcomes challenging. The Plan provides a curricular map that identifies multiple courses responsible for each of the program outcomes.

In addition to the program goals, please also consider UND's institutional and Essential Studies goals for student learning (shown in alignment within parentheses) and identify which goals are similar to program goals.

- | | | |
|---------------|---|--|
| <u> X </u> | 1 | Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”) |
| <u> X </u> | 2 | Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate) |
| <u> </u> | 3 | Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage) |
| <u> X </u> | 4 | Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”) |
| <u> X </u> | 5 | Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”) |
| <u> </u> | 6 | Diversity (“demonstrate understanding of diversity and use that understanding...”) |
| <u> X </u> | 7 | Lifelong learning (“commit themselves to lifelong learning”) |
| <u> X </u> | 8 | Service/citizenship (“share responsibility both for their communities and for the world”) |

Comments regarding program goals and alignment with institutional and Essential Studies goals:

2. ASSESSMENT METHODS

- | | | | |
|--|--------------|----------------|---------------------------|
| Were any specific assessment methods referenced? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • If so, were specifically chosen assessment methods appropriately aligned with individual goals? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |
| • Were both direct and indirect assessment methods used as components of a “multiple measures” approach? | YES <u>X</u> | NO <u> </u> | QUALIFIED Y/N <u> </u> |

Comments:

The Plan identifies eight different assessment methods. The Plan provides a matrix that ties three of the assessment methods to each of the program outcomes. The Plan provides the use of methods on a three cycle, with four of the methods used each year. The Program Self Study that will be submitted by the Department to ABET reports that the cycle was disrupted between 2010 and 2012. All student outcomes were assessed during 2013-2014.

3. ASSESSMENT RESULTS

Were any assessment results reported?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____
• If so, were the results clear in terms of how they specifically affirm achievement of goals?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____
• If so, were the results clear in terms of how they indicate need for improvement?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____
• Were the results tied to goals for student learning?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____

Comments:

The Department did not provide an annual report for 2014. The Department did, however, provide a draft copy of the Program Self Study that will be submitted by the Department to ABET for in preparation for its accreditation visit in October 2015. The Report contains a quite extensive analysis of the Assessment methods used for multiple years.

In addition to program goals, some assessment results may be applicable to institutional and Essential Studies goals. Indicate any goals for which the program presents findings, and, for indicated items, describe findings below.

- | | | |
|----------|---|--|
| <u>X</u> | 1 | Communication – written or oral (“able to write and speak in various settings with a sense of purpose/audience”) |
| <u>X</u> | 2 | Thinking and reasoning – critical thinking (or “be intellectually curious”; analyze, synthesize, evaluate) |
| ____ | 3 | Thinking and reasoning – creative thinking (or “be intellectually creative”; explore, discover, engage) |
| <u>X</u> | 4 | Thinking and reasoning – quantitative reasoning (“apply empirical data...analyze graphical information”) |
| <u>X</u> | 5 | Information literacy (“be able to access and evaluate...for effective, efficient, and ethical use”) |
| ____ | 6 | Diversity (“demonstrate understanding of diversity and use that understanding...”) |
| <u>X</u> | 7 | Lifelong learning (“commit themselves to lifelong learning”) |
| <u>X</u> | 8 | Service/citizenship (“share responsibility both for their communities and for the world”) |

Comments regarding results and the application of results to program, institutional, and Essential Studies goals:

4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____
• If so, do curricular or other improvements/changes arising from assessment results directly address goals for student learning?	YES <u>X</u>	NO ____	QUALIFIED Y/N ____

Comments:

The Report contains a chart outlining each of the curricular changes adopted by the Department over several years and identifies how that change is tied to the achievement of learning objectives.

SUMMARY

Strengths

- | | |
|-------------|---|
| <u>____</u> | A specific plan for assessment is in place. |
| <u>X</u> | Student learning goals are well-articulated. |
| <u>____</u> | Assessment methods are clearly described. |
| <u>X</u> | Assessment methods are appropriately selected. |
| <u>X</u> | Assessment methods are well-implemented. |
| <u>X</u> | Direct and indirect methods are implemented. |
| <u>X</u> | Results are reported. |
| <u>X</u> | Results are tied to closing the loop.
(Decision-making is tied to evidence.) |

Areas for Improvement

- | | |
|-------------|--|
| <u>____</u> | No specific plan for assessment is in place. |
| <u>____</u> | Student learning goals are not well-articulated. |
| <u>____</u> | Assessment methods are not clearly described. |
| <u>____</u> | Assessment methods are not appropriately selected. |
| <u>____</u> | Assessment methods are not well-implemented. |
| <u>____</u> | A single type of assessment methods predominates. |
| <u>____</u> | No results are reported. |
| <u>____</u> | Results are not clearly tied to closing the loop.
(Decision-making is not directly tied to evidence.) |

OVERALL SUMMARY AND RECOMMENDATIONS:

The Department clearly has an extensive and long-standing assessment plan for student learning. After the completion of its accreditation visit next year, the Department may want to consider revisiting its assessment plan for purposes of updating.

MATERIALS REVIEWED

☐ Annual assessment report
☐ Annual Report
☒ Assessment plan (as posted)
☐ Previous assessment review
☒ Other (please describe) Program Self Study for ABET

Reviewer(s):	Name	Bradley Myers	Devon Hansen
	Department	Law School	Geography
	Phone Number	7-2228	7-4587
	e-mail	myers@law.und.edu	devon.hansen@und.edu

Section 1: Y Section 2: Y Section 3: Y Section 4: Y

Coding Key:

- Y = yes, this is done appropriately and well (bearing in mind the kind of program(s) reviewed and recognizing that assessment is a cyclical process, i.e., with additional kinds of data to be collected and analyzed in other years)
Q = qualified yes as action or progress is apparent; however, evidence is lacking that this is completely and appropriately done
N = no, it is unclear whether it was done at all, or it is not done in relationship to student learning

Revised Sept 24, 2014

UNIVERSITY ASSESSMENT COMMITTEE
Feedback to Academic Departments on Assessment Activities Reported in 2014 *(Academic year)*

GRADUATE PROGRAMS

DEPARTMENT: Civil Engineering

DATE: April 21, 2015

PROGRAM(S) COVERED IN REVIEW: Master of Science

COMMITTEE MEMBER(S) CONDUCTING REVIEW: Bradley Myers & Devon Hansen

1. STUDENT LEARNING GOALS

- | | | | |
|---------------------------------------|--------------|---------|------------------------|
| • Were any goals referenced? | YES <u>X</u> | NO ____ | QUALIFIED Y/N ____ |
| • If so, were goals well-articulated? | YES ____ | NO ____ | QUALIFIED Y/N <u>X</u> |
| • Do goals address student learning? | YES ____ | NO ____ | QUALIFIED Y/N <u>X</u> |

Comments:

The Department has an Assessment Plan posted in 2005. The Plan identifies 3 learning goals, each with three related learning objectives. Unfortunately, some of the listed objectives are not actually learning objectives. For example, objective 1.2 says that “students will complete a minimum of 30 credit hours of instruction in civil engineering and related fields.” The assessment plan for the Master of Science is virtually the same as that for the Master of Engineering, with the primary difference being the focus on research projects for the MS, while the ME focusses on a design projects.

2. ASSESSMENT METHODS

- | | | | |
|--|--------------|---------|------------------------|
| Were any specific assessment methods referenced? | YES <u>X</u> | NO ____ | QUALIFIED Y/N ____ |
| • If so, were specifically chosen assessment methods appropriately aligned with individual goals? | YES ____ | NO ____ | QUALIFIED Y/N <u>X</u> |
| • Were both direct and indirect assessment methods used as components of a “multiple measures” approach? | YES ____ | NO ____ | QUALIFIED Y/N <u>X</u> |

Comments:

The Plan calls for a single method to assess each of the goals. The first goal is to be assessed using surveys to be developed for each course offered. The second goal is to be assessed solely through a review of student design projects. The third goal is to be assessed using a survey of graduates conducted two years after they have completed the program.

3. ASSESSMENT RESULTS

- | | | | |
|--|----------|-------------|--------------------|
| Were any assessment results reported? | YES ____ | NO <u>X</u> | QUALIFIED Y/N ____ |
| • If so, were the results clear in terms of how they specifically affirm achievement of goals? | YES ____ | NO ____ | QUALIFIED Y/N ____ |
| • If so, were the results clear in terms of how they indicate need for improvement? | YES ____ | NO ____ | QUALIFIED Y/N ____ |
| • Were the results tied to goals for student learning? | YES ____ | NO ____ | QUALIFIED Y/N ____ |

Comments:

The Department did not submit an assessment report for this year.

4. CLOSING THE LOOP

Were any actions taken on the basis of assessment results reported?

YES _____ NO X QUALIFIED Y/N _____

- If so, do curricular or other improvements/ changes arising from assessment results directly address goals for student learning?

YES _____ NO _____ QUALIFIED Y/N _____

Comments:

SUMMARY

Strengths

- _____ A specific plan for assessment is in place.
- _____ Student learning goals are well-articulated.
- _____ Assessment methods are clearly described.
- _____ Assessment methods are appropriately selected.
- _____ Assessment methods are well-implemented.
- _____ Direct and indirect methods are implemented.
- _____ Results are reported.
- _____ Results are tied to closing the loop.
(Decision-making is tied to evidence.)

Areas for Improvement

- _____ No specific plan for assessment is in place.
- _____ Student learning goals are not well-articulated.
- _____ Assessment methods are not clearly described.
- _____ Assessment methods are not appropriately selected.
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- _____ A single type of assessment methods predominates.
- X No results are reported.
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OVERALL SUMMARY AND RECOMMENDATIONS:

The Department needs to revisit its assessment plan. Each of the objectives under its learning goals should reflect performance measurable by an assessment method. The Department can look to the exceptional work that it currently does in its Bachelor's degree program for discipline specific examples of how the assessment plan can be restructured.

MATERIALS REVIEWED

- _____ Annual assessment report
- X Assessment plan (as posted)
- _____ Previous assessment review
- _____ Other (please describe)

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Section 1: Q Section 2: Q Section 3: N Section 4: N

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DEPARTMENT: Civil Engineering

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PROGRAM(S) COVERED IN REVIEW: Master of Engineering

COMMITTEE MEMBER(S) CONDUCTING REVIEW: Bradley Myers & Devon Hansen

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